

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Previously presented) A method for measuring and trimming the impedance of a driver device in a semiconductor device during a test being carried out before the regular operation of the semiconductor device, the driver device of the semiconductor device including each a pull-up circuit and a pull-down circuit, the method comprising:

substantially simultaneously activating both the pull-up circuit and the pull-down circuit; and

determining a first current flowing through the pull-up circuit or the pull-down circuit, respectively, with substantially simultaneously activated pull-up and pull down circuits during the test carried out before the regular operation of the semiconductor device.

2. (Previously presented) A method for measuring and trimming the impedance of a driver device in a semiconductor device during a test being carried out before the regular operation of the semiconductor device, the driver device of the semiconductor device including each a pull-up circuit and a pull-down circuit, the method comprising:

joint activating both the pull-up circuit and the pull-down circuit; and

determining a first current flowing through the pull-up circuit or the pull-down circuit, respectively, with jointly activated pull-up and pull down circuits during the test carried out before the regular operation of the semiconductor device; wherein the pull-up or pull-down circuits, respectively, are connected to a supply voltage pad or a ground connection, respectively, of the semiconductor device, and the method further comprising:

joint de-activating both the pull-up circuit and the pull-down circuit; and

determining a standby current flowing between the supply voltage pad and the ground connection with jointly de-activated pull-up and pull down circuits.

3. (Original) The method according to claim 2, wherein the pull-up or pull-down circuits, respectively, are connected to a voltage supply pad or a ground connection, respectively, of the semiconductor device, and the method further comprising:
 - joint activating both the pull-up circuit and the pull-down circuit; and
 - determining a total current flowing between the supply voltage pad and the ground connection with jointly activated pull-up and pull-down circuits.
4. (Original) The method according to claim 3, further comprising determining the first current by deducting the standby current from the total current.
5. (Previously presented) The method according to claim 1, further comprising:
 - determining a voltage dropping over the pull-up and/or pull-down circuit, in particular with substantially simultaneously activated pull-up and pull-down circuits.
6. (Previously presented) The method according to claim 1, further comprising:
 - determining a voltage dropping over the substantially simultaneously activated pull-up and pull-down circuits.
7. (Original) The method according to claim 1, wherein one or several of the method steps are performed several times in sequence, each with different settings of transistors contained in the pull-up or pull-down circuits, respectively.

8. (Original) The method according to claim 1, the method comprising:
determining a total impedance of the pull-up and pull-down circuits.
9. (Previously presented) The method according to claim 7, wherein, on the basis of a total impedance determined or the first current determined, respectively, and a voltage dropping over the pull-up and/or pull-down circuit as determined, one of said settings is selected that is to be used during regular operation of the device.
10. (Previously presented) The method according to claim 1, wherein the device is a driver device used for the driving of output signals during the regular operation of the semiconductor device during the test carried out before the regular operation of the semiconductor device.
11. (Previously presented) The method according to claim 1, wherein the device is a test device not used for the driving of output signals during the regular operation of the semiconductor device, the test device for selecting the driver setting for at least one other semiconductor device during the test carried out before the regular operation of the at least one other semiconductor device.
12. (Original) The method according to claim 11, wherein the test device is connected with a device provided on the semiconductor device itself, by means of which a voltage dropping over the pull-up and/or pull-down circuit is determined.

13.-16. (Cancelled)